TECHNICAL DATASHEET

SUPERMICRO · EDGE & EMBEDDED

Supermicro IoT SuperServer SYS-E300-12D-4CN6P

Mini-1U Embedded System with Intel Ice Lake-D CPU with 4 cores Super Server

SKU SYS-E300-12D-4CN6P | 1U | Supermicro

FORM FACTOR	MAX POWER (BASE)	HEAT OUTPUT	PRICE
1U	306 W	1,044 BTU/h	from €1,570

ISO 9001 · ISO 14001 · ISO 27001 · cisco · tp-link · Omada by tp-link

CONFIGURE & QUOTE ONLINE

serverinvest.com/product/sys-e300-12d-4cn6p

01 Product overview

The Supermicro SYS-E300-12D-4CN6P is a Fan-based Embedded IoT Server built on Intel Xeon D with up to 256 GB of memory in 4 DIMM slots.

Mini-1U Embedded System with Intel Ice Lake-D CPU with 4 cores Super Server.

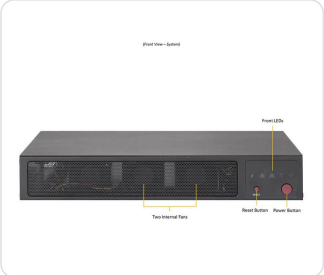
ServerInvest configures every SYS-E300-12D-4CN6P to order, updates BIOS and BMC firmware, installs your operating system on request and runs a 48-hour burn-in test before delivery. Every system includes a 3-year warranty.

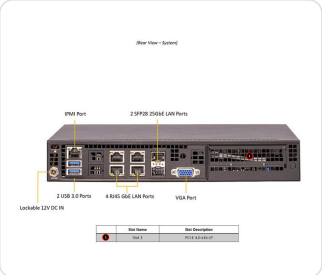
KEY SPECIFICATIONS

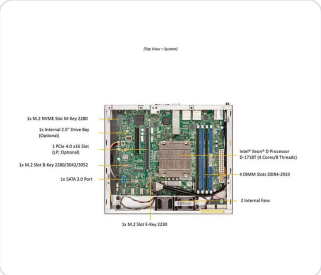
Form factor	**1U**
Processor	**Intel Xeon D / Atom (embedded)**
Memory	**4 DIMM slots, up to 256 GB**
Power supply	**1× 180 W**
Typical power draw	**490 W**
Networking	**2 SFP28 25GbE**
Dimensions (W×H×D)	**437 × 44 mm**

HIGHLIGHTS

- Intel Xeon D
- Up to 256 GB memory · 4 DIMM slots
- Total 1 bay 1 internal fixed 2.5" SATA* drive bay
- Power: 1x 180W
- Networking: 2 SFP28 25GbE







02 Base configuration

Components included in the listed base price — every part can be changed in the online configurator

COMPONENT	DESCRIPTION	QTY
Base system	**Supermicro IoT SuperServer SYS-E300-12D-4CN6P**	**1**
Memory	16GB 5600MT/s DDR5 ECC Registered DIMM Module	**2**
Warranty & support	3-year return-to-base warranty (included)	**1**

Base configuration from **€1,570**
excl. VAT

03 Power & thermal

Calculated for the base configuration

IDLE	TYPICAL	MAXIMUM	HEAT (MAX)	COOLING	PSU LOAD
73 W	190 W	306 W	1,044 BTU/h	0.3 kW	170%

Typical 190 W · max 306 W · single PSU rating 180 W

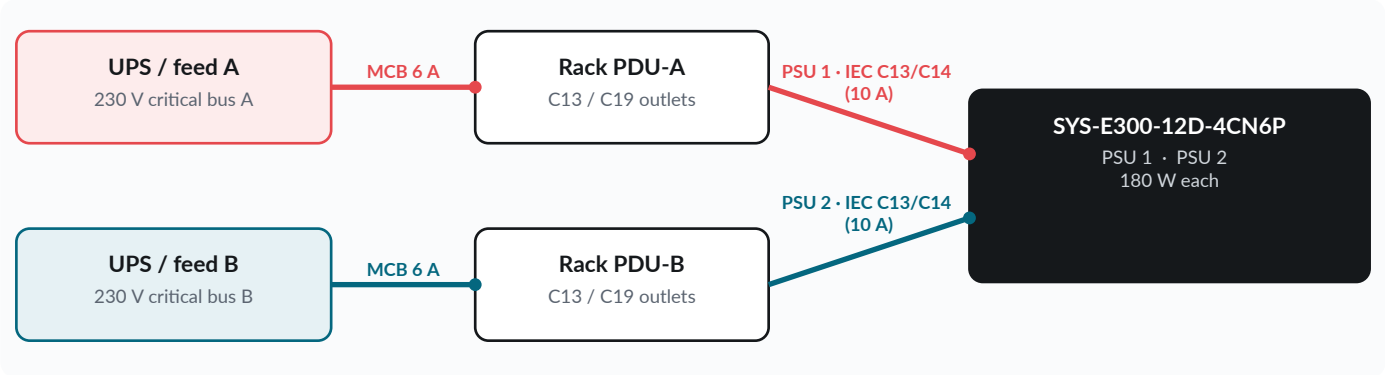
Annual IT energy (24/7)	1,357 kWh
Annual facility energy (PUE 1.5)	2,036 kWh
Annual energy cost	€271 IT · €407 incl. cooling (at 0.20 €/kWh)
CO_2 emissions / year	0.53 t (grid factor 0.26 kg/kWh)
Power supplies	1× 180 W

POWER BY COMPONENT	IDLE	TYPICAL	MAX
Chassis, motherboard, fans, BMC	38 W	59 W	**85 W**
2× Memory 16 GB DIMM	6 W	10 W	**18 W**
CPU (base configuration)	25 W	110 W	**185 W**

DC loads converted to wall power at 94% PSU efficiency; typical load assumed 70% of the time. Engineering estimates — confirm with the manufacturer's power calculator for critical designs.

04 Power connection diagram

Dual-feed (A/B) connection for redundant power supplies



- Connect PSU 1 to PDU-A and PSU 2 to PDU-B (independent feeds) using IEC C13/C14 (10 A) power cords.
- Maximum current per feed: 1.4 A at 230 V — each feed must be able to carry the full load if the other fails.
- Recommended protection per PDU circuit: MCB 6 A, curve C; RCD according to local regulations.
- Heat to remove at full load: 306 W = 1,044 BTU/h (0.3 kW).

05 Full specifications

MOTHERBOARD	
	Super X12SDV-4C-SP6F

PROCESSOR	
CPU	Single FCBGA-2227 Intel Xeon Processor D-1718T
Core Count	Up to 4C/8T; Up to 10MB Cache

Note	Supports up to 46W TDP CPUs (Air Cooled)

SYSTEM MEMORY

Memory	Slot Count: 4 DIMM slots Max Memory (2DPC): Up to 256GB 2933MT/s ECC/non-ECC DDR4 RDIMM/UDIMM View Memory Options
Memory Voltage	1.2V

ON-BOARD DEVICES

Network Connectivity	2 SFP28 25GbE 2 RJ45 1GbE with Intel I210-IT 2 RJ45 1GbE with Intel I350-AM2 View AOC Options

INPUT / OUTPUT

LAN	1 RJ45 1 GbE Dedicated BMC LAN port 2 SFP28 25 GbE LAN ports 2 RJ45 1 GbE LAN ports (Intel I350-AM2) 2 RJ45 1 GbE LAN ports (Intel I210-IT)
USB	2 USB 3.0 Type-A ports (Rear)
Video	1 VGA port (Rear)

SYSTEM BIOS

BIOS Type	AMI 32MB UEFI
BIOS Features	ACPI 6.3 UEFI 2.7 SMBIOS 3.3 PCI FW 3.0

MANAGEMENT

Software	SuperCloud Composer (SCC) Supermicro Server Manager (SSM) Supermicro Update Manager (SUM) Supermicro SuperDoctor 5 (SD5) Super Diagnostics Offline (SDO) Supermicro Thin-Agent Service (TAS) SuperServer Automation Assistant (SAA) New!
Power configurations	Power-on mode for AC power recovery ACPI Power Management

SECURITY

Hardware	Trusted Platform Module (TPM) 2.0 Silicon Root of Trust (RoT) – NIST 800-193 Compliant
Features	Cryptographically Signed Firmware Secure Boot Secure Firmware Updates Automatic Firmware Recovery System Lockdown

CERTIFICATIONS

Operating Systems	Oracle Linux 8.3, RHEL 8.4, Windows Server 2019, Windows Server 2022 View all OS Compatibility and Certification Matrix

CHASSIS

Form Factor	Fan-based Embedded
Model	CSE-E300

DIMENSIONS AND WEIGHT

Height	1.69" (43 mm)
Width	10.43" (264.8 mm)
Depth	8.89" (225.8 mm)
Package	10.87" (H) x 15" (W) x 5.59" (D)
Weight	Gross Weight: 7.5 lbs (3.4 kg) Net Weight: 3.7 lbs (1.6 kg)
Palletized Packing (W x H x L)	54.33" (1380 mm) x 78.5" (1993 mm) x 35" (890 mm)
Available Color	Black

FRONT PANEL

Buttons	Power On/Off
LED	HDD Status LAN1 activity LAN2 activity Power status WIFI activity

EXPANSION SLOTS

PCI-Express (PCIe) Configuration	Default* 1 PCIe 4.0 x16 LP slot (*Requires additional parts, please see the optional parts list for details. For more details on PCIe slot configuration options, please refer to the system callout images above.) View AOC Options
M.2	1 M.2 PCIe 3.0 x1 slot (E-key 2230)

DRIVE BAYS / STORAGE

Drive Bays Configuration	Default: Total 1 bay 1 internal fixed 2.5" SATA* drive bay (*SATA support may require additional storage controller and/or cables, please see the optional parts list for details) View Drive Options
M.2	1 M.2 PCIe 3.0 x2 SATA slot (B-key 2280/3042/3052) 1 M.2 PCIe 3.0 x4 NVMe/SATA slot (M-key 2280) View M.2 Options

SYSTEM COOLING

Fans	Up to 3x 4-PIN PWM 40x40x28mm Fan(s)

POWER SUPPLY

1x 180W
1x 180W power supply
Dimension (WxHxL)
151.3 x 25.4 x 75.6 mm

OPERATING ENVIRONMENT

Environmental Spec.	Operating Temperature: 0°C to 40°C (32°F to 104°F) Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)

06 Built, tested & supported by ServerInvest

Engineered configuration
Every option validated for socket, memory channels, PCIe lanes, power and cooling.

48-hour burn-in
Assembled, firmware-updated and stress-tested before it leaves our workshop.

3-year warranty
Standard on every system, with on-site next-business-day upgrades available.

Rack-ready delivery
Rails, cable management and labelling included — delivered across Europe.

ISO 9001 · ISO 14001 · ISO 27001

Ready to order or need changes?

Configure this system online or talk to a solutions engineer — we reply within one business day.
office@serverinvest.com
Official manufacturer datasheet: serverinvest.com/product/sys-e300-12d-4cn6p/datasheet/manufacturer